



**Material Safety Data Sheet**

Section 1

**MSDS:** ABS

Dynamic Polymer Solutions  
 Telephone Numbers: (810) 324-1451  
 Chemtrec - Transportation Emergency:  
 (800) 424-9300

MATERIAL IDENTIFICATION

|                       |  |           |             |
|-----------------------|--|-----------|-------------|
| <b>PRODUCT NAME:</b>  | DYN-ABS                                      |           |             |
| <b>CHEMICAL NAME:</b> | Acrylonitrile Butadiene Styrene Terpolymer   |           |             |
| <b>CAS NO.:</b>       | Acrylonitrile Butadiene Styrene Terpolymer   | 9003-56-9 | <98.0%      |
|                       | Carbon Black (if Black)                      | 133-86-4  | <2.0 - 4.0% |
| <b>PRODUCT USE:</b>   | Engineered Thermoplastics, Injection Molding |           |             |

Section 2

**HAZARDOUS INGREDIENTS (Additives not hazardous by 29 CFR 1910.1200)**

| Identity | CAS Number | Concentration |
|----------|------------|---------------|
|          |            |               |

Section 3

HEALTH HAZARD DATA

Acute or immediate effects: Material is a non-reactive solid. Mechanical irritation to the eyes may occur due to exposure to fines.

**Routes of entry and systems:** Inhalation, Eye Contact, Skin Contact

|                    |   |
|--------------------|---|
| <b>Ingestion:</b>  | Ingestion is unlikely to be hazardous   |
| <b>Skin:</b>       | Skin may become irritated. Molten polymer presents thermal burn hazard  |
| <b>Eye:</b>        | Eyes may become irritated due to exposure to dusts, processing off-gases  |
| <b>Inhalation:</b> | Inhalation of physical material is unlikely due to pelletized form. Inhalation of processing dusts or off-gases may cause irritation. |



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Section 4

**EMERGENCY FIRST AID**

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| <b>Eyes:</b>   | Flush eyes with plenty of lukewarm water. Seek physician if irritation persists. |
| <b>Skin:</b>   | Wash affected areas with soap and water. Seek physician if thermal burn occurs.  |
| <b>Inhalation:</b>   | Remove to fresh air. If breathing is difficult, seek medical attention.          |
| <b>Ingestion:</b>  | Contact a physician  |
| <b>Chronic Effects:</b>  |  |
| <b>Medical Conditions generally aggravated by this material:</b> | Preexisting eye, respiratory, or skin sensitivities.                             |

Section 5

**FIRE AND EXPLOSION HAZARD DATA**

|  |   |
|--|---|
| <b>Flash Ignition Temperature:</b>         | 730 – 752F (388 – 400C)   |
| <b>Unusual Fire/Explosion Hazards:</b>     | Dust from flaked material or secondary operations (regrinding, sawing, etc.) may form explosive mixtures in air. Vent storage bins, conveyors, etc. See Section 7.  |
| <b>Hazardous Combustion Products:</b>      |   |
| <b>Special Fire Fighting Instructions:</b> | Full emergency equipment with self-contained breathing apparatus should be worn by firefighters. During a fire, irritating and toxic gases and aerosols may be generated by thermal decomposition and combustion. See Section 10. |
| <b>Extinguishing Media:</b>                | Water, Dry Chemical, Carbon Dioxide, Foam   |

Section 6

**ACCIDENTAL RELEASES**



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**Spill or Release:** Remove mechanically by method that minimizes generation of airborne dust.

Section 7

STORAGE CONDITIONS

**NORMAL HANDLING**

**Storage Temperature (Min/Max):** Max 180F (82C)

**Shelf Life:** Not Established

**Special Sensitivity:** Moisture

When handling flaked material or during secondary operations, vent storage bins, conveyors, dust collectors, etc. Ground handling equipment. Keep open flame, sparks, and heat away from dusty areas. Maintain highest standards of housekeeping to prevent accumulation of dust.

**STORAGE RECOMMENDATIONS:** Material should be stored in a clean, dry environment in sealed containers. Material must be dried before processing.

Section 8

PROTECTION INFORMATION

|  |   |
|--|---|
| <b>Eye:</b>                            | Safety glasses recommended  |
| <b>Skin:</b>                           | None required, but fabric gloves are recommended when handling molten material  |
| <b>Ventilation:</b>                    | Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits. See Section 2. Local mechanical exhaust ventilation should be used at sources of air contamination, such as open process equipment, or during purging operations to capture gases and fumes that may be emitted.               |
| <b>Respirator:</b>                     | A NIOSH/MSHA approved dust respirator is recommended if the airborne dust concentration is near or exceeds the nuisance dust exposure limits. If ventilation is not sufficient to control processing gases and fumes, a NIOSH approved respirator should be selected and worn based on contamination levels found in the workplace. |
| <b>Additional Protective Measures:</b> | Greatest potential for injury occurs when working with molten polymeric resins such as during a   |



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|  | <p>purge of a molding machine, or extruder. During this type of operation it is essential that all workers in the immediate area wear eye protection and skin protection as a protection from thermal burns. Purging's should be collected as small flat thin shapes or thin strands to allow for rapid cooling. Precautions should be taken against auto-ignition of hot thick masses of the plastic. Quench with water. Grinder dust is an exposure hazard. Fumes or vapors emitted from the hot melted plastic during converting operations may condense on cool overhead metal surfaces of exhaust dusts. That condensate, usually in the form of a soft grease-like semi sold, may contain substances when can be irritating or toxic. Avoid contact.</p> |
|--|--|

Section 9

PHYSICAL/CHEMICAL DATA

|                             |                       |
|-----------------------------|-----------------------|
| <b>Appearance:</b>          | Black Pellets         |
| <b>Odor:</b>                | Slight Sweet Aromatic |
| <b>Melting Point:</b>       | 180-225F (82 – 107C)  |
| <b>Solubility in Water:</b> | Insoluble             |
| <b>Volatile Content %:</b>  | Negligible            |
| <b>Specific Gravity:</b>    | Approx. 1.05          |

Section 10

HAZARDOUS REACTIVITY

|                                       |  |
|---------------------------------------|--|
| <b>Stability at Room Temperature:</b> | Stable   |
| <b>Materials to Avoid:</b>            | None Known   |
| <b>Conditions to Avoid:</b>           | None Known   |
| <b>Decomposition Temperature:</b>     | Approx. 500F (260C)  |
| <b>Decomposition Products:</b>        | Carbon Dioxide, Water, Carbon Monoxide, Hydrocarbons, Hydrogen Cyanide, Styrene, Acrylonitrile |

Section 11



## Material Safety Data Sheet

### TOXICOLOGICAL INFORMATION

**Toxicity Data for:** Similar ABS resins

**Acute Toxicity**

**Eye Effects:** Non-irritating to slightly irritating (rabbits)

**Skin Effects:** Non-irritating to slightly irritating (rabbits)

**Other Acute Effects:** Practically non-toxic orally (rat) or after skin application (rabbit)

**Medical Conditions Prone to Aggravation by Exposure:**

**Carcinogenicity:** Styrene

NTP – Not Listed

IARC – 2B

OSHA – Not Listed

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Section 12

### ECOLOGICAL INFORMATION

**No ecotoxicological information available**

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Section 13

### DISPOSAL

**Waste Disposal:** Material may be incinerated or landfilled in compliance with federal, state/provincial, and local environmental control regulations.

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Section 14

### TRANSPORT INFORMATION

|                                 |  |
|---------------------------------|--|
| <b>DOT Hazard Class:</b>        | Not Regulated                              |
| <b>Technical Shipping Name:</b> | Acrylonitrile Butadiene Styrene Terpolymer |
| <b>Freight Class Bulk:</b>      | Plastic Materials                          |
| <b>Freight Class Package:</b>   | Plastic Materials, NOI                     |
| <b>Product Label:</b>           | Label Established                          |

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Section 15



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REGULATORY INFORMATION

**OSHA Status:** Hazardous under criteria of OSHA Hazard Communication Standard 29 CFR 1910.1200

SARA TITLE III:

**Section 302 – Extremely Hazardous Substances:** None

**Section 311/312 Hazard Categories:** Immediate, Delayed

**Section 313 Toxic Chemicals:** Styrene (100-42-5) > 0.25%

**RCRA Status:** If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic.

**United States TSCA Status:** On TSCA Inventory

STATE RIGHT TO KNOW LAWS – The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state

| <b>Component Name<br/>(CAS Number)</b>                    | <b>Concentration</b> | <b>State Code</b> |
|---|----------------------|-------------------|
| Styrene Acrylonitrile Copolymer<br>(9003-54-7)            | > 1.0%               | NJ4, PA3          |
| Acrylonitrile Butadiene Styrene Terpolymer<br>(9003-56-9) | > 1.0%               | NJ4, PA3          |
| N, N-Ethylenebiastearamide<br>(110-30-5)                  | < 1.0%               | NJ4               |
| Residual Styrene Monomer<br>(100-42-5)                    | < 0.25%              | MA1, NJ3          |
| Residual Acrylonitrile Monomer<br>(107-13-1)              | < 0.01%              | CA1, MA1          |

**HMIS Rating**

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

|                  |  |
|------------------|--|
| Health           |  |
| Flammability     |  |
| Reactivity       |  |
| PPE              |  |
| # Acute *Chronic |  |



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Section 16

MISCELLANEOUS INFORMATION

The information set forth herein has been gathered from standard reference materials and/or supplier test data and is, to the best knowledge and belief of Dynamic Polymer Solutions, accurate and reliable. Such information is offered solely for your consideration, investigation and verification, and it is not suggested or guaranteed that the hazard precautions or procedures mentioned are the only ones that exist. Dynamic Polymer Solutions makes no warranties, expressed or implied, with respect to the use of such information or the use of the specific material identified herein in combination with any other material or process, and assumes no responsibility therefore.

**END OF MSDS**